



FORM PTO-1449		US Dept. of Commerce Patent and Trademark Office	ATTORNEY DOCKET NO. 4012-113 DIV2	SERIAL NO. 09/430,735
INFORMATION DISCLOSURE STATEMENT  (use several sheets if necessary)			APPLICANT Ekwuribe et al.	GROUP 1639
			FILING DATE October 29, 1999	

OTHER DOCUMENTS (Including Author, Title, Journal-Date, Page Number, Etc.)				
del	CM	Pardridge, W.M., "Blood-Brain Barrier Peptide Transport and Peptide Drug Delivery to the Brain," Amer. Chem Soc. 1995: 265-296.		
	CN	Pardridge, W.M., "CNS Drug Design Based on Principles of Blood-Brain Barrier Transport," J. Neurochem., 1998, 70 (5): 1781-1792.		
	CO	Pardridge, W.M., "New Approaches to Drug Delivery Through the Blood-Brain Barrier," Trends in Biotechnology, 1994: 239-245.		
	CP	Prokai-Tatrai, K., et al., "Brain-Targeted Delivery of a Leucine-Enkephalin Analogue by Retrometabolic Design," J. Med. Chem 39 (24).		
	CQ	Ratner, R. E. et al., "Persistent Cutaneous Insulin Allergy Resulting from High-Molecular Weight Insulin Aggregates," Diabetes, 1990, 39: 728-733.		
del	CR	Robbins, D. C. et al., "Antibodies to Covalent Aggregates of Insulin in Blood of Insulin-Using Diabetic Patients," Diabetes, 1987, 36: 838-841.		
del	CS	Saffran, M. et al., "A New Approach to the Oral Administration of Insulin and Other Peptide Drugs," Science, 1986, 233: 1081-1084.		
	CT	Sakaeda, T., et al., "Conjugation with L-Glutamic Acid for Brain Drug Delivery," Proceed. Intern. Symp. Control. Rel. Bioact. Mater., 1966, 23: 607-608.		
	CU	Shashoua V.E., et al., "γ-Aminobutyric Acid Esters. 1. Synthesis, Brain Uptake, and Pharmacological Studies of Aliphatic and Steroid Esters of γ-Aminobutyric Acid," J. Med. Chem., 1984, 27 (5): 660-664.		
	CV	Shashoua, V.E., et al., "N-Docosahexaenoyl, 3 Hydroxytyramine: A Dopaminergic Compound that Penetrates the Blood-Brain Barrier and Suppresses Appetite," Life Sciences, 58 (16): 1347-1354.		
	CW	Sim, L., et al., "In vitro Autoradiography of Receptor-Activated G Proteins in Rat Brain by Agonist-stimulated Guanylyl 5'-[γ <sup>35</sup> S]thio]-Triphosphate Binding," Proc. Natl. Acad. Sci., USA, 1995, 92: 7242-7246.		
	CX	Terasaki, T., et al., "Oligopeptide Drug Delivery to the Brain," Amer. Chem. Soc. 1995: 297-316.		
	CY	Tsuzuki, N., et al., "Rapid Communication. Adamantane as a Brain-Directed Drug Carrier for Poorly Absorbed Drug: Antinociceptive Effects of [D-Ala <sup>2</sup> ] Leu-Enkephalin Derivatives Conjugated with the 1-Adamantane Moiety," Biochemical Pharmacology, 1991, 41 (4): R5-R8.		
	CZ	Wagner, J., et al., "Neuropharmacology of Endogenous Opioid Peptides," Psychopharmacology: The Fourth Generation of Progress, 1995: 519-529.		
	DA	Weber, S.J., et al., "Distribution and Analgesia of [ <sup>3</sup> H][D-PEN <sup>2</sup> , D-PEN <sup>5</sup> ] Enkephalin and Two Halogenated Analogs after Intravenous Administration," J. Pharm. Exper. Ther., 1991, 259: 1109-1112.		
del	DB	Weber, S.J., et al., "Whole Body and Brain Distribution of [ <sup>3</sup> H]Cyclic [D-PEN <sup>2</sup> , D-PEN <sup>5</sup> ] Enkephalin after Intraperitoneal, Intravenous, Oral and Subcutaneous Administration," J. Pharm. Exper. Ther., 1992, 263: 1308-1316.		

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Examiner  B C. C. S. A	DATE CONSIDERED  skelton
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

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				FILING DATE October 29, 1999			
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>[initials]</i>	AA	4,585,754	29 Apr. 1986	Meisner et al.	514	8	—
<i>[initials]</i>	AB	4,179,337	18 Dec. 1979	Davis et al.	435	181	—
<i>[initials]</i>	AC	4,003,792	18 Jan. 1977	Mill et al.	195	63	—
<i>[initials]</i>	AD	4,849,405	18 Jul. 1989	Ecanow	514	3	—
<i>[initials]</i>	AE	5,013,556	7 May 1991	Woodle et al.	424	450	—
<i>[initials]</i>	AF	4,963,367	16 Oct. 1990	Ecanow	424	485	—
<i>[initials]</i>	AG	4,044,196	23 Aug. 1977	Hüper et al.	536	271	—
<i>[initials]</i>	AH	4,717,566	5 Jan. 1988	Eckenhoff et al.	424	438	—
<i>[initials]</i>	AI	4,698,264	6 Oct. 1987	Steinke	428	402.2	—
<i>[initials]</i>	AJ	4,684,524	4 Aug. 1987	Eckenhoff et al.	424	469	—
<i>[initials]</i>	AK	4,410,547	18 Oct. 1983	Ueno et al.	424	317	—
<i>[initials]</i>	AL	3,256,153	14 Jun. 1966	Heimlich	167	82	—
<i>[initials]</i>	AM	4,935,246	19 Jun. 1990	Ahrens	424	490	—
<i>[initials]</i>	AN	4,797,288	10 Jan 1989	Sharma et al.	424	476	—
<i>[initials]</i>	AO	4,744,976	17 May 1988	Snipes et al.	424	408	—
<i>[initials]</i>	AP	5,055,304	8 Oct. 1991	Makino et al.	424	465	—
<i>[initials]</i>	AQ	5,055,300	8 Oct. 1991	Gupta	424	409	—
<i>[initials]</i>	AR	4,772,471	20 Sep. 1988	Vanlerberghe et al.	424	450	—
<i>[initials]</i>	AS	5,093,198	3 Mar. 1992	Speaker et al.	428	402.21	—
<i>[initials]</i>	AT	4,840,799	20 Jun. 1989	Appelgren et al.	424	493	—
<i>[initials]</i>	AU	4,622,392	11 Nov. 1986	Hong et al.	536	29	—
<i>[initials]</i>	AV	5,653,987	5 Aug. 1997	Modi et al.	424	400	—
<i>[initials]</i>	AW	5,792,834	11 Aug. 1998	Hakimi et al.	530	351	—
<i>[initials]</i>	AX	5,595,732	21 Jan. 1997	Hakimi et al.	424	85.7	—
<i>[initials]</i>	AY	5,539,063	23 Jul. 1996	Hakimi et al.	525	403	—
Continue on page 2							
EXAMINER B celsa						DATE CONSIDERED 5/2/03	
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				FILING DATE October 29, 1999		GROUP 1639	

  

EXAMINER INITIAL	PATENT NUMBER	ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>[initials]</i>	AZ	5,559,213	Hakimi et al.	530	351	—
<i>[initials]</i>	BA	5,747,646	Hakimi et al.	530	351	—
<i>[initials]</i>	BB	5,286,637	Veronese et al.	530	183	—
<i>[initials]</i>	BC	5,631,263	Portoghese et al.	530	279	—
<i>[initials]</i>	BD	5,602,099	Schiller	530	18	—
<i>[initials]</i>	BE	5,545,719	Shashoua et al.	530	345	—
<i>[initials]</i>	BF	5,641,861	Dooley et al.	530	329	—
<i>[initials]</i>	BG	5,663,295	Moreau et al.	530	330	—
<i>[initials]</i>	BH	5,786,447	Schiller et al.	530	307	—
<i>[initials]</i>	BI	4,939,174	Shashoua	530	549	—
<i>[initials]</i>	BJ	5,932,462	Harris et al.	435	188	—

  

FOREIGN PATENT DOCUMENTS							
DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION		
					YES	NO	
						X	

  

OTHER DOCUMENTS (Including Author, Title, Journal-Date, Page Number, Etc.)		
<i>[initials]</i>	BK	Alyautdin, R.N., "Delivery of Loperamide Across the Blood-Brain Barrier with Polysorbate 80-Coated Polybutylcyanoacrylate Nanoparticles," Pharm. Res. J., 1997, 14: 325-328.
	BL	Aoshima, M. et al., "N <sup>4</sup> -Behenoyl-1-β-D-Arabinofuranosylcytosine as a Potential New Antitumor Agent," Cancer Research, 1977, 37: 2481-2486.
	BM	Banting, R. G., et al., "Pancreatic Extracts in the Treatment of Diabetes Mellitus," The Canadian Med. Assoc. J. 1922, 12: 141-146.
	BN	Baker, D. C. et al., "Prodrugs of 9-β-D-Arabinofuranosyladenine. 1. Synthesis and Evaluation of Some 5'-(O-Acyl) Derivatives," J. Med. Chem., 1978, 21(12): 1218-1221.
	BO	Banks, W.A., et al., "Passage of Peptides Across the Blood-Brain Barrier: Pathophysiological Perspectives," Life Sciences, 1996, 59 (23), 1923-1943.
	BP	Boccu, E. et al., "Pharmacokinetic Properties of Polyethylene Glycol Derivatized Superoxide Dismutase," Pharm. Res. Comm., 1982, 14: 11-120.
<i>[initials]</i>	BQ	Bodor, N., et al., "A Strategy for Delivering Peptides into the Central Nervous System by Sequential Metabolism," Science, 1992, 257, 1698-1702.

  

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Examiner  <i>B. CuyA</i>	DATE CONSIDERED  <i>5/2/03</i>
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			FILING DATE October 29, 1999	

	BR	Bodor, N., et al., "Molecular Packaging. Peptide Delivery to the Central Nervous System by Sequential Metabolism," Amer. Chem. Soc., 1995: 317-337.
	BS	Brange, J. et al., "Chemical Stability of Insulin. 1. Hydrolytic Degradation During Storage of Pharmaceutical Preparations," Pharm. Res., 1992, 9 (6): 715-726.
	BT	Brange, J. et al., "Chemical Stability of Insulin. 2. Formation of Higher Molecular Weight Transformation Products During Storage of Pharmaceutical Preparations," Pharm. Res., 1992, 9 (6): 727-734.
	BU	Brewster, M.E., et al., "Effect of Molecular Manipulation on the Estrogenic Activity of a Brain-Targeting Estradiol Chemical Delivery System," J. Med. Chem., 1994, 37: 4237-4244
	BV	Brewster, M.E., et al., "Efficacy of a 3-Substituted Versus 17-Substituted Chemical Delivery System for Estradiol Brain Targeting," J. Pharm. Sci., 1994: A-E.
	BW	Brewster, M., et al., "Tissue Distribution of LY231617, an Antioxidant with Neuroprotectant Activity, in the Rat," J. Pharm. Studies, 1995, 84 (7): 791-793.
	BX	Conradi, R.A., et al., "The Influence of Peptide Structure on Transport Across Caco-2 Cells," Pharm. Res., 1991, 8 (12): 1453-1459.
	BY	Chen, C., et al., "Extensive Biliary Excretion of the Model Opioid Peptide [D-PEN <sup>2,5</sup> ] Enkephalin in Rats," Pharm. Res. J., 14: 345-350.
	BZ	Chiou, G.C.Y., et al., "Systemic Delivery of Enkephalin Peptide through Eyes," Life Sciences, 1988, 43: 509-514.
	CA	Chun, W., et al., "Transmucosal Delivery of Methionine Enkephalin. I: Solution Stability and Kinetics of Degradation in Various Rabbit Mucosa Extracts," J. Pharm.Sci., 1993, 82 (4): 373-378.
	CB	Fix, J.A., "Oral Controlled Release Technology for Peptides: Status and Future Prospects," Pharm. Res., 1996, 13 (12): 1760-1763.
	CC	Gibson, A.M., et al., "Specificity of Action of Human Brain Alanyl Aminopeptidase on Leu-Enkephalin and Dynorphin-Related Peptides," Neuropeptides, 1989, 13: 259-262.
	CD	Gish, D. T. et al., "Nucleic Acids. 11. Synthesis of 5'-Esters of 1-β-D-Arabinofuranosylcytosine Possessing Antileukemic and Immunosuppressive Activity," J. Med. Chem., 1971, 14(12): 1159-1162.
	CE	Hong, C. I. et al., "Nucleoside Conjugates. 7. Synthesis and Antitumor Activity of 1-β-D-Arabinofuranosylcytosine Conjugates of Ether Lipids," J. Med. Chem., 1986, 29: 2038-2044.
	CF	Horvat, J., et al., "Synthesis and Biological Activity of [Leu <sup>5</sup> ] Enkephalin Derivatives Containing D-Glucose," J. Peptide Protein Res., 1988, 31: 499-507.
	CG	Hostetler, K. Y. et al., "Synthesis and Antiretroviral Activity of Phospholipid Analogs of Azidothymidine and Other Antiviral Nucleosides," The Journal of Biological Chemistry, 1990, 265(11): 6112-6117.
CH	Kroll, R.A., et al., "Outwitting the Blood-Brain Barrier for Therapeutic Purposes: Osmotic Opening and Other Means," 1998 Neurosurgery, 42 (5): 1083-1100.	
CI	Maislos, M. et al., "The Source of the Circulating Aggregate of Insulin in Type I Diabetic Patients is Therapeutic Insulin," J. Clin. Invest., 1986, 77: 717-723.	
CJ	Mosnaim, A.D., et al., "Studies of the in Vitro Human Plasma Degradation of Methionine-Enkephalin," Gen. Pharmac., 1988, 19 (5): 729-733.	
CK	Nestor, J., "Improved Duration of Action of Peptide Drugs," Amer. Chem Soc. 1995: 449-471.	
CL	Oka, K. et al., "Enhanced Intestinal Absorption of a Hydrophobic Polymer-Conjugated Protein Drug, Smancs, in an Oily Formulation," Pharm. Res., 1990, 7 (8): 852-855.	

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Examiner B CUSA	DATE CONSIDERED 5/21/03
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<b>FORM PTO-1449 U.S. Department of Commerce</b> <b>Patent and Trademark Office</b>  <b>LIST OF DOCUMENTS CITED BY APPLICANT</b>  (Use several sheets if necessary)				<b>Attorney Docket Number</b> 9233-8DV2		<b>Serial No.</b> 09/430,735	
				<b>Applicants:</b> <div style="text-align: center;">Ekwuribe et al.</div>			
				<b>Filing Date:</b> October 29, 1999		<b>Group</b> 1627 14 39	

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U. S. PATENT DOCUMENTS							
Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate	
	1.	5,681,811	10/28/97	Ekwuribe	514	8	—
	2.	5,693,769	12/02/97	Kahne et al.	536	5	—

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FOREIGN PATENT DOCUMENTS							
Document Number	Date	Country	Class	Subclass	Translation Yes   No		

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							

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